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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/624,808 | 07/22/2003 | David Alan Bailey | ROC920030220US1 | 6643 |
| 46296 7590 03/27/2007 MARTIN & ASSOCIATES, LLC P.O. BOX 548 CARTHAGE, MO 64836-0548 | | | EXAMINER DOAN, DUC T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2188 | |
| SHORTENED STATUTORY PERIOD OF RESPONSE | | MAIL DATE | DELIVERY MODE | |
| 3 MONTHS | | 03/27/2007 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/624,808 | Applicant(s) BAILEY ET AL. | |
| | Examiner Duc T. Doan | Art Unit 2188 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-6,9-11,16 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-6,9-11,16,19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set for in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 3/2/07 has been entered.

Claims 1-19 have been presented for examination in this application. In response to the last office action, the specification has been amended, claims 2-3,7-8,12-15,17-18 have been canceled. As the result, claims 1,4-6,9-11,16,19 are pending in this application.

Claims 1,4-6,9-11,16,19 are rejected.

Applicant's remarks filed 3/2/07 have been fully considered but they are mooted in view of new ground(s) of rejection necessitated by the Applicant's amendments to the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

- (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1,4-6,9-11,16,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Day et al (US Pub 2003/0084030) in view of Tarui et al (US Pub 2002/0112102), and further in view of Kaneko (2003/0163641).

As in claim 1, Day discloses an apparatus comprising: at least one processor (Day's Fig 1: #101A-H CPU); a memory coupled to the at least one processor (Day's Fig 1: #102 memory); a plurality of logical partitions defined on the apparatus (Day's Fig 2: #206B, #205B, #204B a hypervisor partition represented by user application code modules, operating system code modules such as high level OS and OS kernel), a partition manager residing in the memory and executed by the at least one processor (Day's Fig 2: #203, #202 hypervisor management code and based hypervisor code PLIC executed by processor in memory, corresponding to the claim's partition manager), the partition manager managing the plurality of logical partitions and executing separately from the plurality of logical partitions (Day's paragraph 28,37 discloses the partition management code (Fig 2: #203, #202 hypervisor management code and based hyper visor code PLIC) executes separately from logical partition to manage resources in plurality of logical partitions), Day does not expressly disclose the claim's detail of I/O reconfiguration mechanism. However, Tarui discloses the partition manager (Tarui's paragraph 59 lines 1-2, partition control program such as hypervisor) comprising an I/O reconfiguration mechanism that reconfigures identified I/O (Tarui's paragraph 53 reconfiguring I/O resources that being shared among logical partitions); and a logical partition suspend/resume mechanism that suspends at least one of the plurality of logical partitions before the I/O reconfiguration mechanism reconfigures the identified I/O by inhibiting dispatch of tasks to the at least one logic partition (Tarui's paragraph 84

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discloses the partition control program instructs the OS of the current partitions (i.e the partitions whose allocations of resources are being changed, paragraph 83) to stop using the resources, thus obviously no more i/o tasks are issued in these current partitions (i.e corresponding to the claim's suspending logical partition and inhibit dispatch of tasks mechanism);

and waiting until all pending tasks in the at least one logical partition are complete (Tarui's Fig 1: #101 discloses pending tasks in logical partition are flushed by the I/O adapter circuitry until it completed, when no more pending I/O request and byte counter value is zero, see Tarui's paragraphs 65, 67), and that resumes all suspended logical partitions after the I/O reconfiguration mechanism reconfigures the identified I/O by enable dispatching of tasks to the at least one logical partition (Tarui's paragraph 83 and 84 clearly teaches that after reconfiguration of i/o resources, the partitions are permitted/resumed to use the i/o resources, see Tarui's paragraph 84 lines 11-16), obviously when the partitions are permitted to use the i/o resource, the i/o tasks will be dispatched to the previously stopped logical partitions.

It would have been obvious to one of ordinary skill in the art at the time of invention to include the partition control program and associating logic as suggested by Tarui in Day's system thereby the reconfiguration of i/o resources can be done dynamically and in an automatic manner (Tarui's paragraph 84 lines 12-16);

Day does not expressly disclose the claim's aspect of ownership of I/O. However, Tarui further discloses the plurality of logical partitions comprising at least one logical partition that owns identified I/O and at least one logical partition that does not own the

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identified I/O (Tarui's paragraph 53, space sharing allocation allocates each partition with separate I/O resources);

Day and Tarui do not expressly disclose the claim's aspects of suspends/resumes **all** of the plurality of the logical partition. However, Kaneko's paragraph 31 discloses a storage subsystem with I/O resources being assigned separately to plurality of the logical partitions. Kaneko further discloses an I/O reconfiguration including **all** of the logical partition are suspended, the I/O reconfiguration reconfigures the identified I/O by inhibiting dispatch of tasks to **all** of the plurality of logical partition (Kaneko's paragraph 32, the whole system is switch to a disconnect standby mode) and waiting until **all** pending tasks in all of the plurality of logical partitions are completed (Kaneko's paragraph 32 lines 13-14, when the requests from the host have been completely processed), and that resumes all of the plurality of logical partitions after the I/O reconfiguration mechanism reconfigures the identified I/O by enable dispatching of tasks to **all** of the plurality of logical partition (Kaneko's paragraph 33 discloses when there is no more left requests from the host, the logical partitioning configuring/changing is carried out, and when this step is completed, the system resumes to executing **all** suspended requests and other new dispatching requests). Kaneko's paragraph 24 further teaches that the logical partitioning of resources can be done in a dynamically manner. It would have been obvious to one of ordinary skill in the art at the time of invention to include the logical partitioning method and associating logic as suggested by Kaneko in Day's system modified by Tarui, thereby the reconfiguration of i/o resources can be done easily in a dynamically manner (Kaneko's paragraph 24).

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Claim 4 rejected based on the same rationale as in claim 1. Tarui's paragraph 83 further discloses the circuitry detects identified I/O required reconfiguration (reconfiguration changes required when hot-plugged i/o resources).

Claims 5,6,10,11,19 rejected based on the same rationale as in claim 1.

Claims 9,16 rejected based on the same rationale as in claim 4.

Response to Arguments

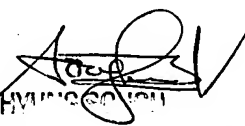
Applicant's remarks filed 3/2/07 have been fully considered but they are mooted in view of new ground(s) of rejection necessitated by the Applicant's amendments to the claims.

Conclusion

When responding to the office action, Applicant is advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist examiner to locate the appropriate paragraphs.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Duc T. Doan whose telephone number is 571-272-4171. The examiner can normally be reached on M-F 8:00 AM 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung S. Souh can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


SUPERVISOR

3-4-07